

REMARKS

In the Amendment, claim 1 has been amended to recite that X is a halogen atom selected from F, Cl and Br, or C₆F₅. This amendment is supported by the specification, for example, paragraph [0016] and Examples 1-10. Specifically, in Examples 1-10, iodonium salt of (tolylcumyl)iodonium tetrakis(pentafluorophenyl)borate (RHODORSIL PHOTOINITIATOR 2074, manufactured by Rhodia Inc.) was used. New Claims 11 and 12 have been added. Claims 11 and 12 are supported by the specification, for example, paragraph [0016]. Claim 2 was previously canceled. No new matter has been added.

Upon entry of the Amendment, claims 1 and 3-12 will be all the claims pending in the application.

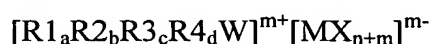
I. Response to Rejections under 35 U.S.C. § 102(b)

- a. Claims 1-10 (sic) have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Japanese Patent Document No. 08-269392 (Niwa et al. '392).
- b. Claims 1-6, 8 and 10 (sic) have been rejected under § 102(b) as allegedly being anticipated by Japanese Patent Document No. JP 08-231938 (Niwa et al. '938).
- c. Claims 1-4, 7 and 9 (sic) have been rejected under § 102(b) as allegedly being anticipated by Japanese Patent Document No. JP 08-218296 (Niwa et al. '296).

Applicants respectfully submit that the present claims as amended are novel over Niwa et al. '392, Niwa et al. '938, and Niwa et al. '296 for the reasons of record and the following additional reasons.

Independent claim 1 recites a cationic polymerizable resin composition comprising (A) a compound having at least one functional group capable of cationic ring-opening polymerization and (B) a cationic polymerization initiator to generate active species by electromagnetic wave or particle beam, which further comprises (C) a compound to generate a carbocation by the action

of the active species generated from (B) the cationic polymerization initiator by electromagnetic wave or particle beam, in an amount of 0.01 to 10.0 % by weight based on 100 % by weight of the sum of the components (A) and (C), wherein the composition does not contain an epoxy compound, and wherein the component (B) is contained in an amount of 0.5 to 10.0 parts by weight based on 100 parts by weight of the sum of the components (A) and (C), and the component (B) is represented by the following formula (1):



wherein the cation is an onium ion; W is I; R1, R2, R3, and R4 are the same or different organic groups; a, b, c and d are an integer from 0 to 3, respectively, and (a + b + c + d) is equal to a valence number of W; M is B, P, As, Sb, Fe, Sn, Bi, Al, Ca, In, Ti, Zn, Sc, V, Cr, Mn or Co; X is a halogen atom selected from F, Cl and Br, or C₆F₅; m is a net charge of the halogenated complex ion; and n is an atomic valence of M.

As described in paragraph [0022] of the present specification, the component (C) is activated by the cationic polymerization initiator (B) and thereby the polymerization is accelerated. The presently recited composition having the specified ratios of components (A), (B) and (C) can realize both curability and transparency, as shown in the Declaration by Mr. Ito previously submitted on April 14, 2008.

Furthermore, as described in paragraphs [0027]-[0028] of the present specification, the composition ratios of components (A), (B) and (C) as defined in claim 1 can provide sufficient curability. Moreover, a decrease in water resistance or coloration of the resins do not occur in practical applications. As such, the composition recited in claim 1 is suitable for use in applications such as a sealing agent, an adhesive, a painting material, a coating material, an ink and a sealing material as defined in claims 5 to 10.

Moreover, the Declaration previously submitted on April 14, 2008, shows that when the component (C) was used in an amount exceeding the presently claimed upper limit of 10.0 wt%, the coloration state becomes worse (Examples 7 and 8 and Comparative Examples 4 and 5).

Applicants also submitted a further Declaration on February 13, 2009, which demonstrates that Reference Example 1 and Example 1, which employed an iodonium salt as the compound (B), provided curability superior to Reference Example 2, which employed a sulfonium salt.

Niwa et al. '392, '938 and '296 are relied upon as disclosing compositions comprising an oxetane compound, a cationic photoinitiator and a vinyl ether.

Niwa '392, '938 and '296 teach the general amount of a vinyl ether compound (which may correspond to the compound (C) recited in the present claims) from 5 to 95 parts by weight. Examples of Niwa et al. '392, '938 and '296 use the component (C) as large as 25 wt% and 75 wt%, which are far from the specified amount of 0.01-10 wt% recited in present claim 1.

Further, though Niwa et al. '392, '938 and '296 describe in paragraph [0054] an iodonium salt photoinitiator of formula (25), in the examples thereof, only sulfonium salts, i.e., a triarylsulfonium salt of formula (33), were employed as the photoinitiator. The triarylsulfonium salt of formula (33) is similar to that employed in Reference Example 2 of the previously submitted Declaration.

Moreover, Niwa et al. '392, '938 and '296 do not disclose or suggest the above discussed effects achievable in the presently claimed invention.

In view of the foregoing, Applicants respectfully submit that present claim 1 is novel and patentable over Niwa et al. '392, Niwa et al. '938, and Niwa et al. '296, and thus the rejections should be withdrawn. Additionally, claims 3-10 depend from claim 1 and thus are patentable over the cited references at least by virtue of their dependency.

II. New claims

Newly added claims 11 and 12 depend from claim 1, and are patentable over the cited references for at least the reasons set forth above.

Further, Niwa et al. '392, '938 and '296 disclose as cationic photoinitiator, the onium salts described in paragraphs [0053] to [0059], wherein diaryliodonium salt of formula 25 is preferred. Niwa et al. '392, '938 and '296 continue to describe in paragraph [0058] that in MX_{k+1} of formula 25, M is a metal, preferably antimony. In addition, Examples of Niwa et al. '392, '938 and '296 use only sulfonium salt of formula (33) where M is antimony.

Thus, Niwa et al. '392, '938 and '296 do not specifically teach the composition containing the compound (B) recited in claims 11 and 12, which does not include antimony.

III. Conclusion


From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at his earliest convenience.

Respectfully submitted,

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